What is claimed is:

1. A stirring apparatus comprising:

a vertical cylindrical vessel;

a plurality of reactors concentrically partitioned in the vertical cylindrical vessel, including an inner reactor;

stirring blades and heaters being provided for each of the reactors;

a common rotating shaft, having fixed thereto stirring blades, at an upper space of the vessel, connected to a driving means mounted on an upper part of the vessel; and

an outlet for volatile matters being provided at the upper part of the vessel,

wherein the stirring blades provided in the inner reactor is without any counterpart rotating shaft along a rotation center.

2. A stirring apparatus according to claim 1, wherein the vessel has two reactors, an outer reactor and the inner reactor, partitioned by a partitioning cylinder, a process solution fed into the outer reactor is heated by a heater and stirred by stirring blades in the outer reactor, the stirred process solution enters the inner reactor over an upper edge of the partition cylinder, the process solution is also heated by a heater and stirred by stirring blades in the inner reactor, and the stirred process solution is removed from the inner reactor.

3. A stirring apparatus according to claim 1, wherein the vessel has three reactors, a first outer reactor, a second reactor and the inner reactor,

partitioned by two partitioning cylinders, a process solution fed into the first outer reactor is heated by a heater and stirred by stirring blades in the first outer reactor, the stirred process solution enters next the second reactor through a clearance between a lower edge of a first partitioning cylinder, of the two partitioning cylinders, the process solution fed into the second reactor is also heated by a heater and stirred by stirring blades in the second reactor, the stirred process solution enters the inner reactor over an upper edge of a second partitioning cylinder, of the two partitioning cylinders, the process solution is also heated by a heater and stirred by stirring blades in the inner reactor, and the stirred process solution is removed from the inner reactor.